

DAIGLE RANCH

Controlled burning cultivates longleaf pine savannas in Louisiana

“The ranch is a great place to raise cattle, timber, kids, and a lot of special plants and animals,” says Louisiana rancher David Daigle.²³ A direct descendant of early Cajun settlers who grazed their livestock on the South’s longleaf pine savannas, Daigle now manages his own ranch with the aim of restoring the native trees that once dotted the landscape. By balancing ranching with longleaf pine conservation, he is helping protect one of the United States’ most threatened ecosystems and the dozens of endangered species that call it home.

Until European settlers arrived, longleaf pines dominated the coastal plains from Virginia to Texas, but they were quickly cleared by settlers, largely to be used in shipbuilding. In recent decades, many landowners have replaced longleaf pine stands with field crops or faster-growing commercial species like loblolly pine, fragmenting a specialized habitat. Today, less than 4 percent of historic longleaf pine forests remain.²⁴

Daigle describes a longleaf savanna as “a prairie with trees.” Whereas the densities associated with many other tree species often crowd out undergrowth, longleaf pine stands are much less dense than stands of other species. Their small crowns allow sunlight to reach the ground, yielding a lush herbaceous layer. This diverse ecosystem supports up to 40 species per square yard and provides habitat for nearly 30 threatened or endangered species, including the red-cockaded woodpecker.²⁵

In 1982, Daigle acquired his first 80 acres of land. Most of it was loblolly pine forest, but he quickly began to plant longleaf pine seedlings to restore the native habitat. His holdings have since grown to 1,400 acres of longleaf pine habitat, much of which is considered wetlands.

Daigle’s cattle benefit from the longleaf savannas. Cattle are considered to be “compatible grazers” with the longleaf ecosystem because with carefully managed stocking rates and proper rotation their hooves and grazing stimulate the herbaceous layer without destroying it. Daigle is careful to make sure that he runs the appropriate amount of cattle for the right length of time to avoid negative effects of overgrazing. Currently, he has 90 head of cattle and typically averages about one cow per 15 to 25 acres of grazable land, which maximizes benefits for the longleaf pines.²⁶

A healthy longleaf pine forest is a mix of old and young trees, with some trees over a century old. To maintain a healthy forest, Daigle thins his tree stands to create openings to allow for new growth. Trees that are harvested during thinning are high quality and are sold to be used as poles, beams, and flooring. This timber brings in revenue for the ranch while also improving forest health.

Even with efforts to restore longleaf pine savanna through cattle grazing and timber thinning, brush and invasive Chinese tallow trees threaten the landscape. To combat these threats and manage overgrown areas, Daigle uses prescribed burning. Longleaf pines are extremely resistant to fire, so burning the undergrowth clears the land while also recycling nutrients, promoting plant diversity, and creating new growth for wildlife. Daigle tries to burn two or three times in a five-year period, and for each fire he creates a management plan, including smoke management, to minimize the chance a fire grows out of control. The prescribed burns also reduce wildfire fuel, mitigating fire risk for the public.

The prescribed burning, along with applications of a targeted herbicide, keep the invasive Chinese



Recruitment clusters provide valuable habitat for the endangered red-cockaded woodpecker (left). Controlled burns can help control invasive species and promote healthy rangeland (center). Longleaf pine trees flourish on the Daigle ranch (right).

tallow from encroaching onto his longleaf pine savannas. The tallow is an incredibly resilient tree that can quickly crowd out pines, meaning less grass for livestock and other wildlife, less harvestable timber, and less habitat for endangered woodpeckers. Daigle says that without active management, the tallow would completely take over the native landscape. Thus far he has been successful, but he warns that it is a mighty task.

The work Daigle has done to create healthy longleaf pine savannas also provides valuable habitat for the endangered red-cockaded woodpecker. The woodpecker's traditional habitat was the longleaf pine, but as the pines were cut and replaced with fast-growing trees or crops, the bird's population declined drastically. Because the woodpecker prefers the dispersed longleaf that grow on southern savannas, Daigle's efforts have created excellent habitat for the bird.

In fact, even though the Endangered Species Act imposes stringent restrictions on the habitats of most species it protects, the U.S. Fish and Wildlife Service encourages forest thinning to create better red-cockaded woodpecker habitat. The agency has found that because of the unique qualities of longleaf pine savannas, there are many ways to harvest timber that are not only consistent with

the woodpecker's natural needs but also sometimes necessary to maintain the open conditions the bird requires.

Daigle has also installed recruitment clusters, which are roosting sites prepared for the endangered woodpecker, by inserting artificial nest cavities into trees. The goal is to attract the woodpeckers to a safe and healthy habitat. The recruitment clusters on Daigle's property have attracted the red-cockaded woodpecker to his trees, where the birds have been photographed.

The ranch is also home to the American chaffseed, an endangered herb found in open, moist pine woods and fire-maintained savannas—the exact habitat on Daigle's ranch. Chaffseed plants grow on a specific tract of the ranch, where they're protected from grazing and human disturbance.

Daigle manages his ranch as an integrated system, realizing that when he conserves his land, it's more productive. By restoring longleaf pine savanna, he is not only restoring one of the most imperiled ecosystems in the world but also providing for his family, supplying the public with food and timber, reducing wildfire risk, and preserving two endangered species. On Daigle's ranch, doing good for the environment means doing well for the business.